

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Canceled)

3. (Currently Amended) ~~A power supply (20) for a LED light source (10), said power supply (20) comprising~~A power supply for an LED light source, said power supply comprising:

a power converter ~~(23)~~ operable to provide a regulated power including a LED current and a LED voltage;

a LED control switch ~~(24)~~ operable to control a flow of the LED current through the LED light source ~~(10)~~; and

wherein said LED control switch is further operable to clamp a peak of the LED current during an initial loading stage of the LED light source;

a switch operable to establish a current path from the LED light source to said power converter when the LED current is below

the peak threshold, said switch further operable to eradicate the current path when the LED current is above the peak threshold

a an LED PWM dimmer ~~(29)~~ operable to provide a pulse width modulation signal to said LED control switch ~~(24)~~ in response to an external dim command,

wherein said pulse width modulation signal has a target pulse width in response to the dim command exceeding a ramp signal, and

wherein said pulse width modulation signal has a minimum pulse width in response to the ramp signal exceeding the dim command.

4. (Currently Amended) The power supply ~~(20)~~ of claim 3, wherein said LED PWM dimmer ~~(29)~~ includes:

an astable multivibrator circuit ~~(129)~~ operable to establish the minimum pulse width in a precise and temperature insensitive manner.

5. (Currently Amended) The power supply ~~(20)~~ of claim 3, wherein said LED PWM dimmer ~~(29)~~ includes:

a comparator ~~(U3)~~ operable to establish the target pulse width in response to a reception of the dim command and the ramp signal.

6. (Currently amended) The power supply ~~(20)~~ of claim 5, wherein said LED PWM dimmer ~~(29)~~ further includes:

a ramp generator operable to provide the ramp signal to said comparator ~~(U3)~~ indicative of the minimum pulse width.

7. (Currently amended) The power supply ~~(20)~~ of claim 6, wherein said LED PWM dimmer ~~(29)~~ further includes:

an astable multivibrator circuit ~~(129)~~ operable to establish the minimum pulse width in a precise and temperature insensitive manner.

8. (Currently Amended) ~~A power supply (20) for a LED light source (10), said power supply (20) comprising~~A power supply for an LED light source, said power supply comprising:

a power converter ~~(23)~~ operable to provide a regulated power including a LED current and a LED voltage;

an LED control switch operable to control a flow of the LED current through the LED light source; and

a detection circuit ~~(30)~~ operable to provide a detection signal indicative of an operating condition of the LED light source ~~(10)~~ associated with the LED voltage,

wherein said LED control switch is further operable to clamp a peak of the LED current during an initial loading stage of the LED light source,

wherein the detection signal has a first level representative of a load condition of the LED light source ~~(10)~~, and

wherein the detection signal has a second level representative of either a short condition or an open condition of the LED light source ~~(10)~~.

9. (Currently Amended) The power supply ~~(20)~~ of claim 8, wherein the load operating condition indicates a magnitude of a LED voltage drop across the LED light source ~~(10)~~ is between zero volts and the LED voltage.

10. (Currently Amended) The power supply ~~(20)~~ of claim 8, wherein the short operating condition indicates a magnitude of a LED voltage drop across the LED light source ~~(10)~~ approximates zero volts.

11. (Currently Amended) The power supply ~~(20)~~ of claim 8, wherein the open operating condition indicates a magnitude of a LED voltage drop across the LED light source ~~(10)~~ approximates the LED voltage.

12. (Currently Amended) ~~The power supply (20) of claim 1, further comprising~~ A power supply for an LED light source, said power supply comprising:

a power converter operable to provide a regulated power including a LED current and a LED voltage;

an LED control switch operable to control a flow of the LED current through the LED light source; and

a current sensor ~~(25)~~ operable to sense the LED current flowing through the LED light source ~~(10)~~, said current sensor ~~(25)~~ including

differential
an ~~operational~~ amplifier ~~(U6)~~, and

means for adjusting a gain of said differential amplifier.

wherein said LED control switch is further operable to clamp a peak of the LED current during an initial loading stage of the LED light source.

13. (Currently Amended) ~~The power supply (20) of claim 1, further comprising~~ A power supply for an LED light source, said power supply comprising:

a power converter operable to provide a regulated power including a LED current and a LED voltage;

an LED control switch operable to control a flow of the LED current through the LED light source; and

a voltage sensor (26) operable to sense the LED voltage applied to the LED light source (10), said voltage sensor (26) including

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an operational amplifier (U6), and
differential

means for adjusting a gain of said differential amplifier,

wherein said LED control switch is further operable to clamp a peak of the LED current during an initial loading stage of the LED light source.

14. (Canceled)

15. (Currently Amended) ~~The method of claim 14, further comprising~~ A method of operating an LED light source, said method comprising:

providing a regulated power to the LED light source, the regulated power including an LED current and an LED voltage;

controlling a flow of the LED current through the LED light source;

clamping a peak of the LED current during an initial loading stage of the LED light source as a function of the LED current relative to a peak threshold; and

generating a detection signal indicative of an operating condition of the LED light source (10) associated with the LED voltage,

wherein the detection signal has a first level representative of a normal operating condition of the LED light source (10), and wherein the detection signal has a second level representative of either a short operating condition or an open operating condition of the LED light source (10).